

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: CSHPP-0006-00(889) DeKalb
P.I. No.: 0006889
Lithonia Industrial Boulevard

OFFICE: Engineering Services

DATE: June 1, 2009

FROM: Ronald E. Wishon, Project Review Engineer *REW*

TO: Mike Lobdell, PE, District Preconstruction Engineer, Chamblee

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held February 23-27, 2009. Responses were received on May 29, 2009. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.


ALT #	Description	Potential Savings/LCC	Implement	Comments
B-4	Remove 20 ft. raised median/ROW	\$367,514	No	This road will serve as a north-south connection for this portion of DeKalb and provide a shorter, more direct route to I-20. The area near the interstate is expected to be developed in the future. Providing a median in this section would allow for future median openings and left turns. The median would also provide a refuge for pedestrians.
H-5	Eliminate Sidewalks through corridor	\$104,725	No	There is a school and a church within the project limits. It is anticipated that both will generate significant pedestrian traffic. DeKalb is committed to providing pedestrian access in urban settings.
E-3	Revise signal support configuration	\$32,000	No	DeKalb County standard is black steel strain poles with mast arms as proposed. This standard is being constructed throughout the county as part of local and federal aid projects. Maintenance costs of mast arm signals are considerably less than those of span wire signals.

ALT #	Description	Potential Savings/LCC	Implement	Comments
E-4	Removal of Fiber Optic Interconnect	\$34,730	No	It is DeKalb County's intent to connect all the signals in the County and adding fiber now will help ensure these signals will be properly timed in the future. The County wishes to tie these signals to the existing system at the interchange so that they will be properly timed with this existing signal system. The County is committed to providing efficient signal systems as part of an overall "green" effort. Fiber optic interconnect is a valuable part of this system.
F-2	Remove Curb & Gutter	\$115,659	No	This roadway's functional classification is an urban minor collector. In addition, the area around it is an urban area. It is anticipated the development along this roadway will be commercial due to its close proximity to the interstate.
A-5	Reduce pavement thickness	\$773,737	Yes	This will be done.
B-5	Reduce lane width to 11 ft lanes on mainline	\$807,769	No	It appears a mistake was made in the calculations. Reducing the lane width from 12' to 11' should have reduced the construction cost at roughly the same ratio (8.33%). It is anticipated that if 11' lanes are used the actual savings would be approximately \$226,500. It is anticipated that the development in this area will be commercial and thus truck traffic will increase for which 12' lanes are more appropriate. In addition the plans are ready for PFPR so the cost to redesign (approximately \$35,000) and time to redesign the project (1 month for design variance, 2-3 months for redesign) would cause significant delays to the overall schedule of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
A-1	Use concrete on mainline instead of asphalt	\$1,051,923	No	This recommendation actually costs more initially with anticipated maintenance savings for the County during the lifecycle of the roadway. DeKalb County does not have experience maintaining concrete roadways and thus the cost to perform maintenance would be much higher than originally anticipated.
E-4a	Use loop detection vs. video detection	\$68,800	No	The VE teams cost calculations for loop detection appear to be very low. The unit price for loops is approximately \$750. There are 28 detection zones on this project. Including boring and conduit, the total for loop detection would be approximately \$45,000, compared to \$10,763 the VE team calculated. This would reduce the anticipated savings to \$34,600. Even though the initial costs are lower the cost of maintenance to the County far outweighs these initial savings. Video detection requires less ROW as the detection zone can be on private property. If loops are used, then additional right of way will be required.
I-1	Eliminate guardrail	\$148,215	Yes	This will be done where feasible. The areas of guardrail near the interchange and ESAs will remain.

ALT #	Description	Potential Savings/LCC	Implement	Comments
E-2	Round About	\$158,907	No	The savings calculated only considered additional ROW costs and did not include additional pavement, curb and gutter and drainage. DeKalb County believes these costs would outweigh the savings. Providing pedestrian access through a 2-lane roundabout is not desirable, especially since the County anticipates significant pedestrian travel between a school and a church which are on opposite sides of the proposed road. In addition, the time and costs to redesign this area would outweigh any significant savings and result in delaying the project.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved:  Date: 6/13/07
Gerald M. Ross, PE, Chief Engineer

REW/LLM
Attachments

c: Genetha Rice Singleton
Melvin Waldrop
Mickey McGee
Ken Werho
Steve Carter
Terry Rogers
Walt Taylor
Butch Welch
Tim Matthews
Lisa Myers
Matt Sanders

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: CSSTP-0006-00(889), DeKalb County
P.I. No.0006889
Lithonia Industrial Blvd. Phase 3

OFFICE: District 7

DATE: May 28, 2009

FROM: Mike Lobdell, PE, District Preconstruction Engineer

TO: Ronald E. Wishon, Acting Project Review Engineer

SUBJECT: **Value Engineering Study-Responses**

Reference is made to the recommendations that were contained in the Value Engineering Mod 1 Training Report dated March 11, 2009 for the above referenced project.

The main purpose of this project is to provide a north-south access route through this portion of DeKalb County. The project would also provide a more direct and shorter route from I-20 Evans Mill Road and the roadway capacity for current and future planned developments in the area.

A typical cross section for both mainline and cross road consists of 4-12 ft lanes, 20 ft raised landscaped median and variable width sidewalks, 5 -10 ft, and a 2 ft grass strip.. The total project length is 1.10 miles.

Our responses and recommendations to the VE Recommendations are as follows:

<i>VE Recommendation No. & Description w/ Projected Initial Cost Savings</i>		<i>Recommendation Response</i>	<i>Comments</i>
Idea No.			
B-4	Remove raised median/ROW \$367,514	Approval Not Recommended	<ul style="list-style-type: none"> • This road will serve as a north-south connection for this portion of DeKalb and provide a shorter, more direct rout to I-20. In addition the area near the interstate is expected to be developed in the future. Providing a median in this section would allow for future median openings or at least the space for a left turn. • The GDOT Design Policy Manual calls for a 5 lane section minimum. DeKalb County feels that removing the median and having a four lane section would produce a safety issue increasing threat for head on collisions. • Not providing space for separate left turn lanes (no median) would greatly affect the LOS of this project. Since left turns would "shut down" a thru lane during high volume periods. • The proposed median would provide a refuge for pedestrians crossing the 4 lane facility. • In addition, an Access Management Plan is required by ARC for this project. The median is necessary in order to accomplish the goals of the Access Management Plan including encouraging inter-parcel access and limiting the number of access points. • Growth in the area is expected to be commercial in nature with traffic generating destinations increasing the need for a median. • Approximately 1/8 of the required right of way will be donated reducing the anticipated savings by approximately \$10,000. • Eliminating the median would result in a redesign fee of approximately \$35,000 and a schedule delay of 2-3 months. The Final EA is currently at FHWA for approval.
H-5	Eliminate sidewalks throughout the corridor \$104,725	Approval Not Recommended	<ul style="list-style-type: none"> • This road is designated as an urban minor collector. Sidewalk is a feature that is included in the design of roads designated as urban. • There are an existing school and church within the project limits on opposite sides of the proposed road. It is anticipated that both will generate significant pedestrian traffic both to/from offsite locations as well as to/from each other. • DeKalb is committed to providing pedestrian access in urban settings.

<i>VE Recommendation No. & Description w/ Projected Initial Cost Savings</i>		<i>Recommendation Response</i>	<i>Comments</i>
E-3	Revise Signal Support Configurations \$32,000	Approval Not Recommended	<ul style="list-style-type: none"> DeKalb County standard is black steel strain poles with mast arms as proposed. This standard is being constructed throughout the county as part of local and federal aid projects. Maintenance costs of mast arm signals are considerably less than those of span wire signals. In just a few years the cost of maintaining the span wire signals would overcome the up front construction savings.
E-4	Removal of Fiber Optic Interconnect \$34,730	Approval Not Recommended	<ul style="list-style-type: none"> It is DeKalb County's intent to connect all the signals in the County and adding this now will help ensure these signals will be properly timed in the future. In addition, DeKalb County wishes to tie these signals to the existing system at the interchange so that they will be properly timed with this existing signal system. DeKalb County is committed to providing efficient signal systems as part of an overall "green" effort. Fiber optic interconnect is a valuable part of this system. Inclusion of the interconnect as part of the project comes at a relatively low cost. If it were not installed with the project and had to be done at a later date, it would come at a considerably higher expense.
F-2	Remove curb & gutter \$115,659	Approval Not Recommended	<ul style="list-style-type: none"> This roadway's functional classification is an urban minor collector. In addition, the area around it is an urban area. As stated above the County is committed to providing multimodal transportation options with the sidewalk behind curb and gutter. In addition it is anticipated the development along this roadway will be commercial not residential due to its close proximity to the interstate.
A-5	Reduce Pavement Structure \$773,737	Approval Recommended	<ul style="list-style-type: none"> OMR will have the final approval of the pavement design but DeKalb County will move forward with suggested pavement structure.

VE Recommendation No. & Description w/ Projected Initial Cost Savings		Recommendation Response	Comments
B-5	Reduce lane width \$807,769	Approval Not Recommended	<ul style="list-style-type: none"> It appears a mistake was made in the calculations. Reducing the lane width from 12' to 11' should have reduced the construction cost at roughly the same ratio (8.33%). The estimated savings the VE Team calculated are 29.72%. It is anticipated that if 11' lanes are used that the actual savings would be approximately \$226,500. It is anticipated that the development in this area will be commercial and thus truck traffic will increase for which 12' lanes are more appropriate. In addition the plans are ready for PFPR pending environmental approval so the cost (approximately \$35,000) and time to redesign the project (1 month for design variance, 2-3 months for redesign) would cause significant delays to the overall schedule of the project. In addition, approval of a design variance would be questionable because the only legitimate reason for the variance would be project cost which is not typically a reason that is considered.
A-1	Use concrete on mainline \$137,203 (additional cost to do concrete) \$1,051,923 (future savings)	Approval Not Recommended	<ul style="list-style-type: none"> This recommendation actually costs more initially with anticipated maintenance savings for the County during the lifecycle of the road. By not recommending this recommendation the County and State would save \$137,203 up front. DeKalb County does not have experience maintaining concrete roadways and thus the cost to perform maintenance would be much higher than originally anticipated.
E-4a	Use loop detection vs. video detection \$68,800	Approval Not Recommended	<ul style="list-style-type: none"> The VE teams cost calculations for loop detection appear to be very low. The unit price for loops is approximately \$750. There are 28 detection zones on this project. When you add in boring and conduit, the total for loop detection would be approximately \$45,000, compared to \$10,763 the VE team calculated. This would reduce the anticipated savings to \$34,600. Even though the initial costs are lower the cost of maintenance to the County far outweighs these initial savings. Loops go out frequently and at any given time hundreds are not operational around the county. It would only take each loop to go out 1 time for the savings to disappear and over the life cycle of the road we would expect each loop to have to be replaced more than once. Video detection requires less right of way as the detection zone can be on private property. If loops are used, then additional right of way will need to be purchased.
I-1	Eliminate guardrail \$148,215	Approval Recommended	<ul style="list-style-type: none"> DeKalb County will remove the guardrail where it is feasible to do so. The areas of guardrail near the interchange and ESAs will remain. Preliminary calculations of guardrail to be removed appear to be similar to what the VE team recommended.

<i>VE Recommendation No. & Description w/ Projected Initial Cost Savings</i>		<i>Recommendation Response</i>	<i>Comments</i>
E-2	Roundabout \$158,907	Approval Not Recommended	<ul style="list-style-type: none"> • The savings calculated only took into account additional ROW costs associated with this option. However additional pavement, curb and gutter and drainage will need to be added since this would be a 2 lane roundabout. DeKalb County believes these costs would outweigh the savings by simply removing the signal. • Providing pedestrian access through a 2-lane roundabout is not desirable, especially since the County anticipates significant pedestrian travel between a school and a church which are on opposite sides of the proposed road. • 2-lane roundabouts are not widely used in the southeast United States. • According to FHWA guidance on Roundabouts the minimum inscribed circle diameter for a double lane roundabout is 150'. Additional curb and gutter, shoulder and easement would be necessary. The areas provided in this report don't appear to be this large and thus the cost for ROW may be more costly than shown. • In addition the time and costs to redesign this area would outweigh any significant savings and result in delaying the project.

-End of Responses-

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PLAN AND PROFILE OF PROPOSED
LITHONIA INDUSTRIAL BOULEVARD EXTENSION - PHASE III

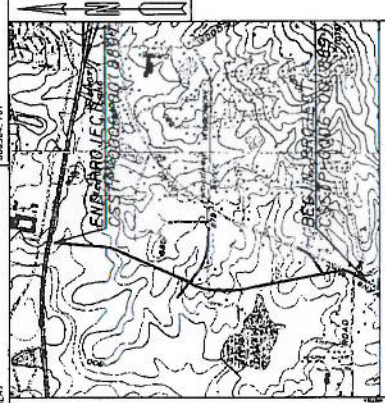
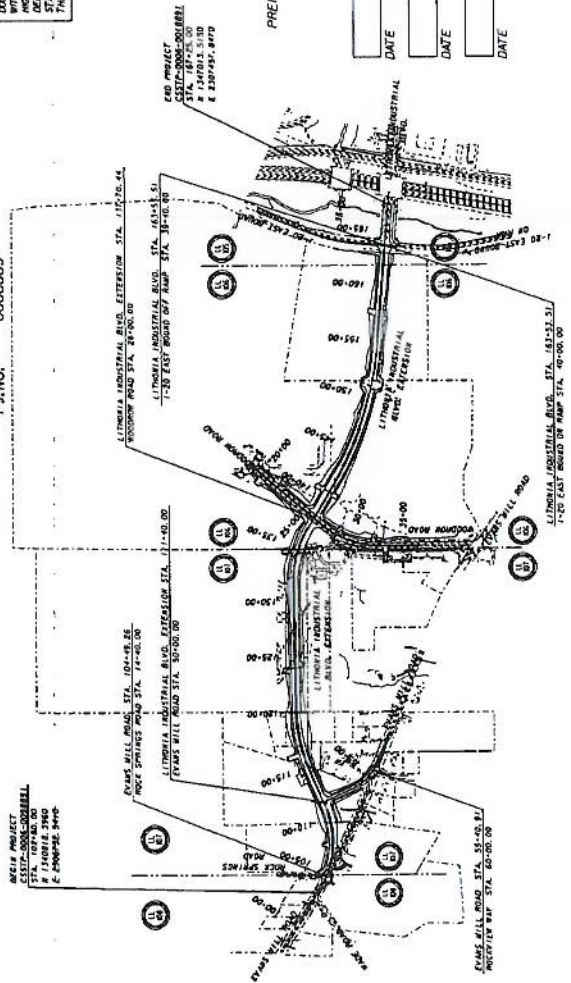
DEKALB COUNTY
FEDERAL AID PROJECT
CSSTP-0006-00(889)

NOTE: ALL REFERENCES IN THIS DOCUMENT WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS OR PHOTOGRAPHS USED OR TO BE USED IN CONNECTION WITH THIS DOCUMENT TO "STATE HIGHWAY DEPARTMENT OF GEORGIA," "STATE HIGHWAY DEPARTMENT," "GEORGIA STATE HIGHWAY DEPARTMENT," "MOHAWK DEPARTMENT," OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.



PREPARED BY: _____
Infrastructure, environment, facilities

DATE		DISTRICT 1 PRECONSTRUCTION ENGINEER
DATE		DISTRICT 2 DESIGN ENGINEER
DATE		CHIEF ENGINEER
		LOCATION AND DESIGN APPROVAL
		PRELIMINARY FIELD PLAN REVIEW
		FINAL FIELD PLAN REVIEW
		PLANS COMPLETED



DESIGN DATA:	2030
TRAFFIC ADT.:	6800 (2010)
TRAFFIC ADT.:	12500 (2030)
TRAFFIC DHV.:	1290 (2030)
DIRECTIONAL DIST.:	50/50
% TRUCKS:	5.2%
24 HR TRUCKS %:	4.3%
SPEED DESIGN:	45 MPH

FUNCTIONAL CLASS:
URBAN MINOR COLLECTOR

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 83) WEST ZONE AND THE NORTH AMERICAN VERTICAL DATUM (NAVD 83) OF 1988.

COUNTY	PROJECT No.	PROJECT No.	MILES	LENGTH OF PROJECT
COUNTY	PROJECT No.	PROJECT No.	MILES	NET LENGTH OF ROADWAY
				NET LENGTH OF BRIDGES
				NET LENGTH OF PROJECT
				NET LENGTH OF EXCEPTIONS
				GROSS LENGTH OF PROJECT

PRELIMINARY



THE DATA TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLAYS OR IN ANYWAY INDICATED THEREIN, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SPECIFICATIONS 6204-022.05 AND 04.03 OF THE SPECIFICATIONS.

PRECONSTRUCTION STATUS REPORT FOR PI:0006889

PROJ ID : 0006889
COUNTY : Dekalb
LENGTH (MI) : 1.10
PROJ NO.: CSSTP-0006-00(889)
PROJ MGR: Lobdell, Mike
OFFICE : District 7
CONSULTANT: Local Design, Local PE funds
SPONSOR : Dekalb County
DESIGN FIRM: ARCADIS U.S., Inc.

LITHONIA INDUSTRIAL BLVD FM I-20 TO EVANS MILL RD- PHASE III
MPO: Atlanta TMA
TIP #: DK-328
MODEL YR : 2020
TYPE WORK: Roadway Project
CONCEPT: New Construction
PROG TYPE: N
Prov. for ITS: N
BOND PROJ :

MGMT LET DATE : 10/15/2011
MGMT ROW DATE : 10/15/2010
SCHED LET DATE : 11/1/2011
WHO LETS?: Local Let
LET WITH :

SCHED		SCHED	ACTIVITY	ACTUAL	ACTUAL	%	PROGRAMMED FUNDS				STIP AMOUNTS			
START	FINISH	FINISH		START	FINISH		Phase	Approved	Proposed	Cost	Fund	Status	Date Auth	Fund
6/16/2009			Concept Development	5/24/2006	9/1/2006	100	PE	LOCL	LOCL	168,000.00	LOC	PRECST		LOC
			Concept Meeting	8/1/2006	8/1/2006	100	ROW	LOCL	LOCL	4,038,000.00	LOC	PRECST		LOC
			PM Submit Concept Report	8/15/2006	8/15/2006	100	CST	2010	2011	6,508,000.00	L230	PRECST		L230
			Receive Preconstruction Concept Approval	8/22/2006	8/29/2006	100								
			Management Concept Approval Complete	8/29/2006	9/1/2006	100								
			Value Engineering Study	10/20/2008		83								
			Public Information Open House Held	9/19/2006	9/19/2006	100								
			Environmental Approval	9/12/2006		35								
			Pub Hear Held/Comm Resp (EA/FONSI, GEPA)	12/11/2008	12/11/2008	100								
			Field Surveys/SDE	9/1/2006	9/26/2006	100								
			Preliminary Plans	9/29/2006		31								
			Underground Storage Tanks			0								
			404 Permit Obtainment			0								
			FFPR Inspection			0								
			R/W Plans Preparation			0								
			R/W Plans Final Approval			0								
			L & D Approval			0								
			R/W Acquisition			0								
			Stake R/W			0								
			Soil Survey			100								
			Final Design	5/29/2007	7/13/2007	0								
			FFPR Inspection			0								
			Submit FFPR Responses (OES)			0								
Bridge: NO BRIDGE REQUIRED Design: MC/CK EIS: DE A Appvd 0.07.08 FONSI Not Appd On Schedule ROW Dollar 5.7.09 LGPA: PFA SGN DEKALB DO PE/ROW/UTIL & 20% CST 2-14-07. Prog. Develop: PROGRAMMED AT THE REQUEST OF ARC - FY05 Traffic Op: SEND PLANS FOR REVIEW 9.29-05 EMG: PE BY COUNTY							District Comments DEKALB (1/10/06) CONCEPT DEV. TO BEGIN SOON. (3/14/06) ARCADIS SELECTED AS CONSULTANT. CONCEPT APPD (9/1/07). CONCEPT TO BE REVISED PER PIOH COMMENTS. WAITING ON NEW TRAFFIC STUDY FOR REV CONCEPT (5/8/07). (9/10/07) WAITING FOR REVISED CONCEPT. PUBLIC HEARING TO BE HELD BY FEB 08. (1/8/08) REV CONCEPT SUB. (9/9/08) COUNTY EXPECTS EA APPROVED IN APRIL '09. (5/12/09) DISTRICT REVIEWING VE RESPONSES.							

Prel. Parcel CT: 15	Total Parcel in ROW System:	Cond. Filed:	Acquired by: LOC	DEEDS CT:
Under Review:	Options - Pending:	Relocations:	Acquisition MGR:	
Released:	Condemnations- Pend:	Acquired:	R/W Cert Date:	